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| 10/737,362 | 12/16/2003 | Brian Andrew Carr | MCG00333 | 6018 |

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| EXAMINER | |
|---|---|
| KAO, JUTAI | |
| **ART UNIT** | **PAPER NUMBER** |
| 2616 | |

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/737,362 | CARR, BRIAN ANDREW | |
| | Examiner | Art Unit | |
| | Ju-Tai Kao | 2616 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *06 September 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) 5-7 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 5-7 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments filed on 09/06/2007 have been fully considered but they are not persuasive.

Specifically, the applicant only argues that Schwartz's backplane switch 12 is just a switch and is not the claimed node card having an Ethernet bridging unit (see Applicant's remark, page 4, third paragraph). However, according to the passage in Schwartz previously cited, "Backplane switch 12 may include one or more components either mounted directly to backplane 14 or installed on a circuit card that is plugged or inserted onto a socket or other interface on backplane 14" as recited in column 5, line 41-44. That is, the backplane switch could be implemented on a circuit card, or the aggregate node card using the language of the present application, mounted on a socket, or aggregate slot according to the language of the present application. Since the backplane card is connected to both the socket and the node cards, connections between the node cards and the aggregate slot is also made. In addition, backplane switch 12 also acts as the bridging unit that makes point-to-point connection with the plurality of node cards 16a-f via pins 18 on the node cards and pins 40a-e on the backplane switch 12 as shown in Fig. 1. Backplane switch also acts as the bridging units by connecting the node cards to external addresses via its external ports 42 via connection 44 as shown in Fig. 1. Furthermore, the previous action explains the claimed technique of point-to-point connections via receive pins and transmit pins using Dove and Schwartz.

In summary, the original rejection made using prior art 1, Dove and Schwartz covers every single elements of the claimed invention. Schwartz recites a backplane switch circuit card that anticipates the claimed aggregation card including the bridging unit. Newly added amendments further emphasize the point-to-point connection between the node cards and the aggregation card. However, the previously cited reference, Dove, explains the technique, as shown in the previous action. Thus, the original rejection is maintained while being slightly modified to read on the amended claim in this action and the action is made final.

### *Response to Amendment*

Rejections made against claim 1-4 and 8-9 are withdrawn as the corresponding claims are cancelled.

Claim 5 is amended in a fashion that changes the scope of the original claim.

Newly added amendments further emphasize the point-to-point connection between the node cards and the aggregation card. However, the previously cited reference, Dove, explains the technique, as shown in the previous action. Thus, the original rejection is maintained while being slightly modified to read on the amended claim in this action and the action is made final.

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claim 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Prior art 1 in view of Dove (US 2005/0036506) and Schwartz (US 6,947,410).

Prior art 1 discloses a short version of the PICMG 2.16 specification including the following features.

Regarding claim 5, a data processing system comprising a packet switched backplane a packet switched backplane (see "Packet Switching Backplane" recited in page 3, section "Packet Switching Backplane Overview) having a plurality of node slots (see node slots and fabric slots in Fig. 6 on page 6) characterized in that dedicated links (see the dedicated one-to-one connection between node slots 1-4 and fabric card link port 1-4 in Fig. 6 on page 6) connect at least one of said node slots (nodes slots 1-4 in Fig. 6 on page 6) to at least one aggregation slot (see fabric slots a and b in Fig. 6 on page 6; also see "link port 'a' of each Node Slot is connected to a Link Port of Fabric Slot 'a'" recited in line 1-3 on page 6), said aggregation slot comprising at least one other node slot (the Fabric Board Link Ports 1 to N in Fig. 6, on page 6) as well as connect the at least one of said node slots to said aggregation slot to make a direct point-to-point Ethernet connection (see the dedicated point-to-point connection between node slots 1-4 and fabric card link port 1-4 in Fig. 6 on page 6; also see "Ethernet connection" recited in section "Packet Switching Backplane Overview" on page 3).

Prior art 1 does not disclose the following features: regarding claim 5, having a plurality of node cards connected to said node slots and that the Ethernet transmit pins of at least one of said node slots connect to the Ethernet receive pins of at least one aggregation slot and that Ethernet receive pins of at least one of said node slot connects to the Ethernet transmit pins of said aggregation slot to make the direct point-to-point Ethernet connection wherein an aggregation card comprising a node card equipped with an Ethernet bridging unit and an external Ethernet connector is connected to said aggregation slot and said Ethernet bridging unit bridges between said node cards and external addresses by means of said external Ethernet connector; regarding claim 6, wherein said Ethernet bridging unit is an Ethernet switch; regarding claim 7, wherein each of said node cards is connected to two aggregation cards.

Dove discloses a method for automatically switching media connections when operating in forced speed and duplex mode including the following features.

Regarding claim 5, wherein Ethernet (see "Ethernet" recited in paragraph 45 on page 5) transmit pins (see transmit pins 3 and 6 and connection 22 in Fig. 2) of said at least one node slots (see rejection to claim 1 using Prior art 1) are connected to Ethernet receive pins (see receive pins 1 and 2 and connection 22 in Fig. 2) of said at least one aggregation slot (see rejection to claim 1 using Prior art 1) and Ethernet (see "Ethernet" recited in paragraph 45 on page 5) receive pins (see receive pins 1 and 2 and connection 24 in Fig. 2) of said at least one node slots (see rejection to claim 1 using Prior art 1) are connected to Ethernet transmit pins (see transmit pins 3 and 6 and connection 24 in Fig. 2) of said aggregation slot(see rejection to claim 1 using Prior art

1) to make a direct point-to-point Ethernet connection (see explanation above, using Prior art 1).

Schwartz discloses the system and method for communicating data packets using a backplane switch including the following features.

Regarding claim 5, having a plurality of node cards (see "backplane cards 16a, 16b, 16c, 16d, 16e, and 16f" as recited in column 3, line 33-35 and Fig. 1) connected to said node slots (see interface 18 connected to backplane cards 16a-16f in Fig. 1 and "interfaces 18 are sockets...mounted to backplane...and backplane cards 16 plug or insert into the sockets" recited in 4, line 8-11) and an aggregation card (see "backplane switch...installed on a circuit card" as recited in column 5, line 43-44) comprising a node card (see "circuit card" as recited in column 5, line 43-44) equipped with an Ethernet bridging unit (see "backplane switch" recited in column 5, line 43-44 and backplane switch 12 in Fig. 1) and an external Ethernet (see "gateway card 16e...communicates...to network device 22 according to an Ethernet protocol" recited in column 7, line 37-41 wherein network device 22 is an external device as shown in Fig. 1) connector (see "external ports 42" and "link 44" as recited in column 6, line 26-27 and Fig. 1, wherein the external ports 42 is located on the backplane switch and connected to link 44), wherein the external Ethernet connector connects to external address (see external port 42 being connected to external addresses 22a, 22b via connections 44), and wherein the aggregation card is connected to said aggregation slot (see the socket on backplane 14 as recited in: "backplane switch 12...installed on a circuit card that is plugged or inserted into a socket...on backplane 14" in column 5, line 41-44) and said

Ethernet bridging unit (backplane switch 12, as described above) bridges between said node cards (backplane cards 16a-16f as described above) and external addresses (see "Backplane switch 12 receives...destination network addresses assigned to backplane cards 16...and communicates the data packets to backplane cards 16..." as recited in column 5, line 33-41) by through the direct point-to-point Ethernet connection (see direct point-to-point connection between the node cards 16a-f and the Ethernet switch 12; further connection is made to the external addresses as shown in Fig. 1: external ports 42 and links 44 as described above; see "receives a data packet with a destination network address...backplane switch 12 identifies external port 42 associated with the destination network address and communicates the data packet..." see column 5, line 53-60).

Regarding claim 6, wherein said Ethernet bridging unit (see backplane switch 12 as described in the rejection to claim 5, and shown in Fig. 1) is an Ethernet switch (see backplane switch 12 as described in the rejection to claim 5, and shown in Fig. 1; also see "Ethernet protocol" as recited in column 4, line 49-63).

Regarding claim 7, wherein each of said node cards (backplane cards 16a-16f described in the rejection to claim 5 and shown in Fig. 1) is connected to two aggregation cards (see backplane switch 12 in Fig. 1, which is connected to a circuit card connected to a socket of the backplane as described in the rejection to claim 5. In addition, Fig. 6 of Prior art 1 shows node slots 1-4 (which are connected to backplane cards in Fig. 1 of Schwartz) being connected to two fabric slots a and b (where the circuit card including backplane switch is connected to in Schwartz). That is, the

backplane cards connect to the node slots 1-4, which are connected to two fabric slots that connect to aggregation circuit cards).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Prior art 1 by using the features, as taught by Dove and Schwartz, in order to provide compatibility to the commonly-used Ethernet-based systems; and order to communicate with external devices.

***Conclusion***

3. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ju-Tai Kao whose telephone number is (571)272-9719. The examiner can normally be reached on Monday ~Friday 7:30 AM ~5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kwang Yao can be reached on (571)272-3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KWANG BIN YAO
SUPERVISORY PATENT EXAMINER

Ju-Tai Kao